

## REMARKS

The application was filed with 30 claims. In Preliminary Amendment A, claims 31 and 32 were added, and claims 29 and 30 were canceled. Presently, claims 1, 8, 11, 12, 15, and 20 are amended, and new claim 33 is added to capture and clarify the subject matter of claim 13, which is canceled herein. Accordingly, claims 1-12, 14-28 and 31-33 (31 claims) remain pending in the application.

### *Claim Objections*

The Examiner believes that "V" in claim 1 should be "V\*" for clarity and consistency with the V" in formulas (I), (II), and (III).

Applicants point out that there is a difference between the definition of the organic residue V and the organic residue V\*. Whereas organic residue V is the entire residue between the amino and/or ammonium group Q, organic residue V\* is the specific organic residue between a silicone atom of a polydiorganosiloxane group and the amino and/or ammonium group Q as shown in formula (I). So, in other words, V\* is only part of a polydiorganosiloxane group containing organic residue V.

In claim 3, the Examiner believes that "and" should be removed from between formulas (II) and (III). Applicants agree, and have so amended the claim.

In claim 6, formula (IV), the Examiner believes that "V" should instead be "V\*." Similarly, as explained above, this change is not in line with the invention (i.e., replacing "V" with "V\*"), because these indications represent two different groups. Again, "V" designates the entire organic residue between two groups Q, whereas "V\*" indicates specifically the connecting group between the silicone of a polydiorgano siloxane residue and a group Q, in other words, V\* is only part of a group V.

In claim 7, the Examiner believes that two occurrences of "and" between the formulas should be removed. Also in claim 7, the Examiner believes that "or" above "a tetravalent..." should be "and." Applicants agree to both corrections, and have so amended the claim.

In claim 13, the Examiner believes that "respectively" should fall at the end of the claim. We agree, and new claim 33, which replaces and corrects claim 13, has been so written.

In claim 15, the Examiner believes that "and" should appear before "selected." Applicants respectfully disagree. The auxiliaries (c) are selected from a group including several elements, and the conjunction "and" is correctly placed at the end of the enumeration in the fifth line of claim 15 before the carriers (d).

In claim 20, a duplicate instance of "claims" should indeed be removed, and the claim has been so amended.

***Claim Rejections - 35 U.S.C. 112, second paragraph***

The Examiner rejects claim 1 because " $V^{Si1}$ " lacks antecedent basis. The Examiner is correct, as the first instance of this symbol was erroneously omitted in Preliminary Amendment A. It has been added back to claim 1 herein, thus overcoming the rejection and several noted hereinbelow.

The Examiner believes that "exclusive of the polyorganosiloxane radical" is confusing. As previously explained, residue V is the entire organic residue between two residues Q. Such residue V may or may not comprise polyorganosiloxane units. Conversely, the radicals  $V^2$  **must** comprise a polydiorganosiloxane unit, whereas the residue  $V^1$  does not necessarily contain a polydiorganosiloxane unit. However, in the case when residue  $V^1$  does contain a polydiorganosiloxane unit, it is a short chain polydiorganosiloxane unit with  $n_2$  being 0 to 19 in contrast to  $V^2$ , wherein  $n_1 = 20$  to 1000. Accordingly, the indication "exclusive of the polysiloxane radicals  $Z^2$ ", at page 8, lines 11-12, is not confusing. Again, Applicants note that V is not equal to  $V^*$ .

Applicants further invite the Examiner also to consider preparation examples 1 to 3. These examples show that the polysiloxanes (a1) have silicone containing residues  $V^2$  between two quaternary ammonium groups Q and silicone-free groups  $V^1$ .

Claim 8 includes a "preferably" statement, rendering the claim confusing. The Examiner will note that the "preferably" clause has been removed.

Also regarding claim 8, The Examiner contends that the limitation "and wherein the group -NH- bonds to... thiocarbonyl carbon atom" is unclear.

In the limitation "wherein the group -NH- binds to a carbonyl and/or thiocarbonyl carbon atom" in claim 8, (page 7, lines 2-3) the "NH-group" at this place refers to the "NH-group" which is part of the definition of  $R^2$ , i.e. the -NH-group which is indicated in the fourth line from the bottom of page 6 of claim 8 of the Preliminary Amendment. This is to establish that the side groups may not include an ammonium group or a protonatable amino group. The indication that the -NH-group binds to a carbonyl- and/or a thiocarbonyl carbon atom means that there can only be an NH group in the context of an amido group or a thioamido group, which means that the -NH-group is not protonatable.

Furthermore, with respect to the limitation in lines 5 and 6 at page 7 of claim 8, "wherein

the groups  $\begin{array}{c} | \\ \text{---N---} \end{array}$  and  $\text{---NR}^2\text{---}$  bind to at least one carbonyl and/or thiocarbonyl carbon atom" this refers to the said carbonyl and/or thiocarbonyl groups being a possible constituent of the hydrocarbon radical having up to 1000 carbon atoms of the unit V. This language is present to establish that the unit V cannot include ammonium or protonatable amino groups, in order not to have an overlap with the definition of the ammonium or amino group Q. It is hoped that this discussion provides clarity.

Claims 11 and 12 lack antecedent basis for  $V^{Si}$ . The Examiner will note that, in addition to the amendment to claim 1 to include this limitation, claims 11 and 12 have been amended to recite that compound (a1) further comprises more than 1 or more than 2 units  $V^{Si}$ , and defines  $V^{Si}$  as a polyorganosiloxane group. The rejection is thus overcome.

The Examiner has rejected claim 13 for deficiencies in clarity relating to the groups - $\text{CONR}^2$ - as well as  $\text{---C(O)---}$  and  $\text{---C(S)---}$ . Claim 13 has been canceled in favor of new claim 33, which contains the subject matter thereof, and has been rewritten and reformatted to eliminate the indefiniteness. The rejection is thus moot.

In claim 13, the Examiner cannot find basis for groups  $V^1$  and  $V^2$  being identical or different. The Examiner will note that claim 33, as a corrected version of claim 13, includes the

originally intended limitation, "the groups R<sup>3</sup> in the groups V<sup>1</sup> and V<sup>2</sup> may be identical or different," thus overcoming the rejection.

Also in claim 13, the Examiner believes there is no basis for V<sup>1</sup> and V<sup>2</sup> containing -C(O)-, -C(S)- or Z<sup>1</sup>. The presentation of claim 33 in the place of claim 13 overcomes this rejection.

In claim 15, the Examiner believes "consisting of" is inconsistent with "containing" in claim 1. The Examiner will note that claim 15 has been amended to recite "containing," thus rendering the rejection moot.

The above amendments and explanations render the claims clear and precise.

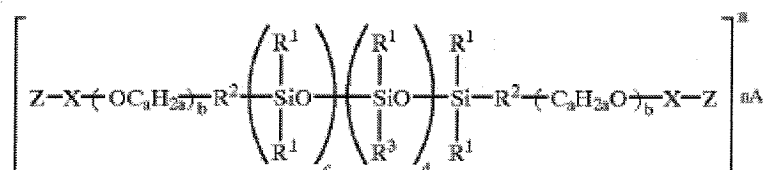
***Claim Rejections – 35 U.S.C. 103(a) – (Masschelein)***

Claims 1-28 and 31-32 are rejected under 35 U.S.C. 103(a) as being unpatentable over Masschelein et al., U.S. 2002/0103094, ("Masschelein"). The Examiner contends that Masschelein discloses a polyorganosiloxane composition for treating fabrics, comprising a cationic silicone polymer containing quaternary nitrogen moieties. The Examiner believes that quaternary nitrogen moieties can either be present in pendant groups (corresponding to the claimed (a2) compound) or in the backbone (corresponding to the claimed (a1) compound), and laundry adjunct agents. The Examiner refers to paragraphs 7-10, 14, 39-46, and 164 as well as the Examples.

The Examiner continues, contending that the amounts of the ingredients are exemplified in Examples. For claims 4, 5, 31, and 32, the Examiner admits that Masschelein is silent on the relative amounts of the cationic silicone polymers. However, the Examiner concludes that it would have been obvious to employ the cationic silicone polymers in an equal amount because both polymers are used for the same purpose in the composition. The Examiner also points out that Applicants do not show the criticality of the relative amounts of the ingredients. For claim 14, since the Masschelein composition allegedly contains cationic silicone polymers that read on those instantly claimed, the Examiner contends that he has a reasonable basis to believe both compositions are liquids at 40°C.

According to the Examiner the polyorganosiloxane compositions of Masschelein contain cationic silicone polymers, wherein the quaternary nitrogen moieties can either be present in

pendant groups (the claimed (a2) compound), or in the backbone (the claimed (a1) compounds). While it appears that the Examiner has correctly anticipated the gist of the present invention, i.e. the use of a mixture of two cationic silicone polymers, one of which has the quaternary nitrogen moieties as pendant groups and one of which has the quaternary nitrogen moieties as backbone groups, it appears that the Examiner's interpretation of Masschelein requires examination. The Applicants respectfully request that the Examiner consider the formula shown in claim 2 of Masschelein:



It becomes evident that  $R^1$ , (i.e. the group pendant to the polydiorganosiloxane group), does not have an amino or ammonium group as a possible substituent. On the other hand, the definition of group (a2) of the present claims, as shown in formulas (II) and (III), clearly requires that the polydiorganosiloxane residue contains pendant groups which have amino or ammonium groups Q. Such amino and/or ammonium polysiloxane compounds (a2) are, contrary to the Examiner's contentions, **not** disclosed or suggested in the Masschelein reference. This holds true for all other descriptions of polysiloxane moieties in this reference. The Examiner has referred inter alia to paragraph 0045 of the reference. This is in fact the only place where a distinction has been made between quaternary nitrogens located in the backbone in contradistinction to where they are located "pendant". However, there are no specific structures disclosed in this document which show that, in particular, the polydiorganosiloxane moiety that has such pendant quaternary ammonium groups. Accordingly, there is nothing in this reference which gives any indication of compounds according to the definition of (a2) in the present claims. Nor is there any suggestion of using a combination of the two compounds (a1) and (a2). Accordingly, the combination of the two amino and/or ammonium polysiloxane compounds (a1) and (a2) is clearly neither disclosed, nor rendered obvious by the cited reference.

Furthermore, as shown in Table 2, and as explained below Table 2 of the present specification, the use of these two types of amino and/or ammonium siloxane softeners leads to

improved softening properties for paper or textile substrates. Again there is nothing that suggests such results starting from the Masschelein reference.

It is hoped that upon closer consideration of the reference and the discussion hereinabove, that the Examiner will acknowledge the patentability of all pending claims.

### **Conclusion**

If clarification of the amendment or application is desired, or if issues are present which the Examiner believes may be quickly resolved, the Examiner is invited to initiate a telephone interview with the undersigned attorney to expedite prosecution of the present application.

If there are any additional fees resulting from this communication, please charge same to our Deposit Account No. 18-0160, our Order No. GEB-16347.

Respectfully submitted,

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